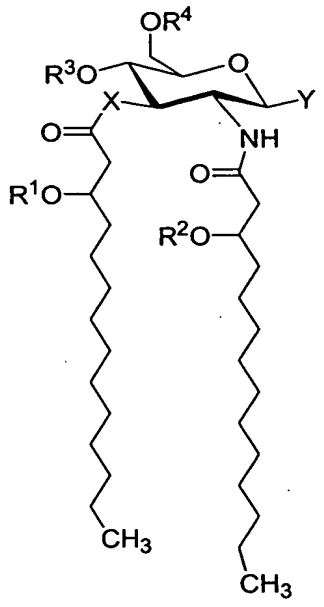
WHAT IS CLAIMED IS:

1. A method for modulating the production of cytokines in a subject in need of such modulation comprising administering to the subject an effective amount of one or more compounds having the formula:



and pharmaceutically acceptable salts thereof, wherein

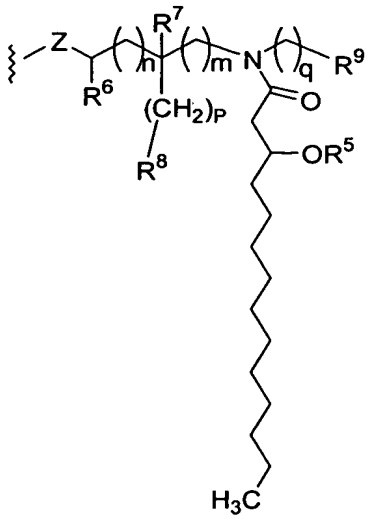
X is a member selected from the group consisting of –O- and –NH-;

R^1 and R^2 are each members independently selected from the group consisting of $(C_2\text{-}C_{24})$acyl;

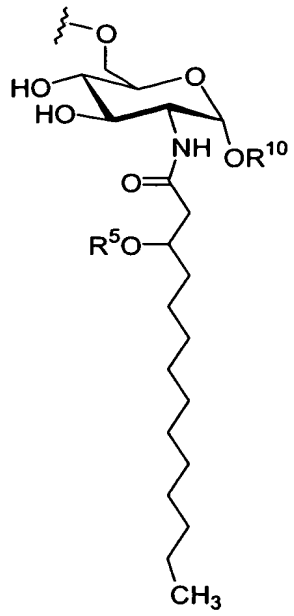
R^3 is a member selected from the group consisting of H and $-PO_3R^{11}R^{12}$, wherein R^{11} and R^{12} are each members independently selected from the group consisting of -H and $(C_1\text{-}C_4)$alkyl;

R^4 is a member selected from the group consisting of –H, $-CH_3$ and $-PO_3R^{13}R^{14}$, wherein R^{13} and R^{14} are each members independently selected from the group consisting of –H and $(C_1\text{-}C_4)$alkyl; and

Y is a radical selected from the group consisting of



and



wherein the subscripts n, m, p and q are each independently an integer of from 0 to 6;

R^5 is (C_2-C_{24})acyl;

R^6 and R^7 are members independently selected from the group consisting of H and CH_3;

R^8 and R^9 are members independently selected from the group consisting of H, OH, (C_1-C_4)alkoxy, -PO_3H_2, -OPO_3H_2, -SO_3H, -OSO_3H, -^{NR15R16}, -SR^{15}, -CN, -NO_2, -CHO, -CO_2R^{15}, -$CONR^{15}R^{16}$, -$PO_3R^{15}R^{16}$, -$OPO_3R^{15}R^{16}$, -SO_3R^{15} and -OSO_3R^{15} wherein R^{15} and R^{16} are each members independently selected from the group consisting of H and (C_1-C_4)alkyl;

R^{10} is a member selected from the group consisting of H, CH_3, -PO_3H_2, -phosphonooxy(C_2-C_{24})alkyl, and -carboxy(C_1-C_{24})alkyl; and

Z is –O or –S-;

with the proviso that when R^3 is –$PO_3R^{11}R^{12}$, R^4 is other than –$PO_3R^{13}R^{14}$, and with the further proviso that when R^3 is –PO_3H_2, R^4 is H, R^{10} is H, R^1 is *n*-tetradecanoyl, R^2 is *n*-octadecanoyl and R^5 is *n*-hexadecanoyl, then X is other than –O-.

2. A method in accordance with claim 1, wherein the compound or compounds are administered in the form of pharmaceutically acceptable salts.

3. A method in accordance with claim 1, comprising administering a prodrug or prodrugs of the compound or compounds.

4. A method in accordance with claim 1, wherein the compound or compounds are administered in the form of a composition further comprising one or more pharmaceutically acceptable carriers.

5. A method in accordance with claim 1, wherein the compound or compounds are administered in the form of an aqueous composition comprising water and one or more surfactants.

6. A method in accordance with claim 5, wherein said one or more surfactants are selected from the group consisting of dimyristoyl phosphatidyl glycerol (DPMG), dipalmitoyl phosphatidyl glycerol (DPPG), distearoyl phosphatidyl glycerol (DSPG), dimyristoyl phosphatidylcholine (DPMC), dipalmitoyl phosphatidylcholine (DPPC), distearoyl phosphatidylcholine (DSPC); dimyristoyl phosphatidic acid (DPMA), dipalmitoyl phosphatidic acid (DPPA), distearoyl phosphatidic acid (DSPA); dimyristoyl phosphatidyl ethanolamine (DPME), dipalmitoyl phosphatidyl ethanolamine (DPPE) and distearoyl phosphatidyl ethanolamine (DSPE).

7. A method in accordance with claim 5, wherein the molar ratio of said compound or compounds to surfactant is from about 10:1 to about 1:10.

8. A method in accordance with claim 1, wherein at least one of said R^1, R^2 and R^5 are selected from the group consisting of $(C_2\text{-}C_6)$acyl.

9. A method in accordance with claim 1, wherein at least one of said R^1, R^2 and R^5 is selected from the group consisting of $(C_2\text{-}C_6)$acyl and the total number of carbon atoms in R^1, R^2 and R^5 is from about 6 to about 22.

10. A method in accordance with claim 1, wherein at least one of said R^1, R^2 and R^5 are selected from the group consisting of $(C_2\text{-}C_6)$acyl and the total number of carbon atoms in R^1, R^2 and R^5 is from about 12 to about 18.

11. A method in accordance with claim 1, wherein X and Z are both -O-.

12. A method in accordance with claim 1, wherein R^1, R^2 and R^5 are each independently selected from the group consisting of $(C_{12}\text{-}C_{24})$acyl with the proviso that the total number of carbon atoms in R^1, R^2 and R^5 is from about 44 to about 60.

13. A method in accordance with claim 12, wherein said total number of carbon atoms is from about 46 to about 52.

14. A method in accordance with claim 12, wherein X and Z are both -O-.

15. A method in accordance with claim 1, wherein at least one of said R^1, R^2 and R^5 are selected from the group consisting of (C_6-C_{12}) acyl.

16. A method in accordance with claim 1, wherein at least one of said R^1, R^2 and R^5 are selected from the group consisting of (C_6-C_{12}) acyl and the total number of carbon atoms in R^1, R^2 and R^5 is from about 18 to about 36.

17. A method in accordance with claim 15, wherein at least one of said R^1, R^2 and R^5 is a C_6 acyl group and at least one of said R^1, R^2 and R^5 is a C_{10} acyl group.

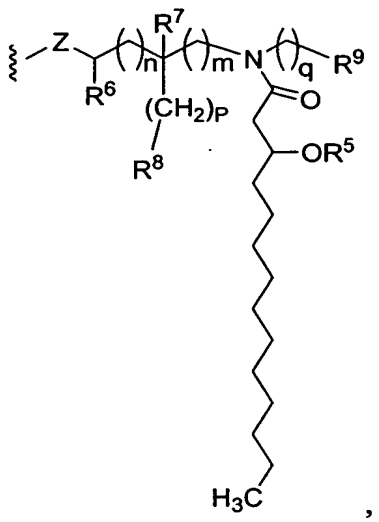
18. A method in accordance with claim 1, wherein said compound or compounds is administered to said subject by a route selected from the group consisting of parenteral, oral, intravenous, infusion, intranasal, inhalation, transdermal and transmucosal.

19. A method in accordance with claim 1, wherein said compound or compounds is administered intranasally.

20. A method in accordance with claim 1, wherein the production of cytokines in the subject is enhanced.

21. A method in accordance with claim 1, wherein the production of cytokines is inhibited.

22. A method in accordance with claim 1, wherein Y is



and R^8 is CO_2H.

23. A method in accordance with claim 22, wherein X is O, Y is O, n, m, p and q are 0; R^3 is phosphono; and R^4, R^6, R^7 and R^9 are hydrogen.

24. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_6 acyl.

25. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_7 acyl.

26. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_8 acyl.

27. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_9 acyl.

28. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_{10} acyl.

29. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_{11} acyl.

30. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_{12} acyl.

31. A method in accordance with claim 22, wherein R^1, R^2 and R^5 are all C_{14} acyl.

32. A method in accordance with claim 22, wherein at least one of R^1, R^2 and R^5 is C_6 acyl and at least one other of R^1, R^2 and R^5 is C_{10} acyl.

33. A method in accordance with claim 22, wherein R^1 is C_{10} acyl and R^2 and R^5 are both C_6 acyl.

34. A method in accordance with claim 22, wherein R^5 is C_{10} acyl and R^1 and R^2 are both C_6 acyl.

35. A method in accordance with claim 22, wherein R^1 is C_6 acyl and R^2 and R^5 are both C_{10} acyl.